

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1-36. (Canceled)

37. (New) An arrangement in a core network node in a mobile radio communication system for prolonging a packet-switched signalling connection between the core network node and a mobile station, said arrangement comprising:

means for receiving a request message from the mobile station;

means for deciding whether to prolong the packet-switched signalling connection;

and

means for providing information to the mobile station as to whether or not the packet-switched signalling connection is being prolonged.

38. (New) The arrangement according to claim 37, wherein the means for providing information to the mobile station includes means for sending a response message to the mobile station in response to the request message, said response message including an indication as to whether or not the packet-switched signalling connection is being prolonged.

39. (New) The arrangement according to claim 38, wherein the request message received from the mobile station is a mobility management request message.

40. (New) The arrangement according to claim 39, wherein the response message is an acceptance message concerning the mobility management request message received from the mobile station.

41. (New) The arrangement according to claim 39, wherein the request message received from the mobile station includes a request for prolongation of the packet-switched signalling connection.

42. (New) The arrangement according to claim 41, wherein the mobile communication system is a Universal Mobile Telecommunication System (UMTS), and the core network node is a Serving GPRS Support Node (SGSN).

43. (New) The arrangement according to claim 42, wherein the prolongation request comprises a Follow-on Request (FOR).

44. (New) The arrangement according to claim 38, wherein the indication in the response message as to whether or not the packet-switched signalling connection is being prolonged is placed in an existing, non-used part of an information element (IE) of the response message.

45. (New) The arrangement according to claim 44, wherein the indication in the response message as to whether or not the packet-switched signalling connection is being prolonged comprises a single bit.

46. (New) A mobile station supporting communication of packet data in a mobile radio communication system, said mobile station comprising:

means for sending a request message over an established packet-switched signalling connection to a packet data node;

means for receiving a response message from the packet data node and extracting from the response message, an indication of whether or not the packet-switched signalling connection is being prolonged;

means for interpreting the extracted indication; and

control means for determining whether to send an additional request message to the packet data node based on an interpretation of the extracted indication.

47. (New) The mobile station according to claim 46, wherein the means for sending a request message includes means for sending a mobility management request message to the packet data node.

48. (New) The mobile station according to claim 47, wherein the means for sending a mobility management request message also sends a request to prolong the packet-switched signalling connection.

49. (New) The mobile station according to claim 48, wherein the control means includes means for preventing the mobile station from sending additional requests to prolong the packet-switched signalling connection if the extracted indication indicates that the packet-switched signalling connection has been terminated.

50. (New) The mobile station according to claim 48, wherein the control means includes means for preventing the mobile station from sending a request to establish a new packet-switched signalling connection if the extracted indication indicates that the packet-switched signalling connection has been prolonged.

51. (New) The mobile station according to claim 48, wherein the control means includes:

means for delaying or rejecting upper layer requests to the packet data node if a GPRS Mobility Management (GMM) procedure is running; and

means for sending to the packet data node, a request to prolong the packet-switched signalling connection when the GMM procedure is terminated.

52. (New) A method in a mobile radio communication system for prolonging a packet-switched signalling connection between a core network packet data node and a mobile station, said method comprising:

establishing a packet-switched signalling connection between the packet data node and the mobile station;

sending a request message from the mobile station to the packet data node over the packet-switched signalling connection;

deciding in the packet data node whether to prolong the packet-switched signalling connection;

sending a response message from the packet data node to the mobile station, said response message including an indication as to whether or not the packet-switched signalling connection is being prolonged; and

controlling actions in the mobile station based on whether or not the packet-switched signalling connection is being prolonged.

53. (New) The method according to claim 52, wherein the step of sending a request message includes:

sending a mobility management request from the mobile station to the packet data node; and

sending with the mobility management request, a request for prolongation of the packet-switched signalling connection.

54. (New) The method according to claim 52, wherein the step of sending a response message from the packet data node to the mobile station includes adding at least one information bit to an existing, defined acceptance message relating to the received request message, said at least one information bit indicating whether or not the packet-switched signalling connection is being prolonged.

55. (New) The method according to claim 52, wherein the step of controlling actions in the mobile station includes:

delaying or rejecting upper layer requests to the packet data node if a mobility management procedure is running; and

sending to the packet data node, a request to prolong the packet-switched signalling connection when the mobility management procedure is terminated.

56. (New) The method according to claim 52, wherein the step of controlling actions in the mobile station includes preventing the mobile station from sending additional requests to prolong the packet-switched signalling connection if the extracted indication indicates that the packet-switched signalling connection has been terminated.

57. (New) The method according to claim 52, wherein the step of controlling actions in the mobile station includes preventing the mobile station from sending a request to establish a new packet-switched signalling connection if the extracted indication indicates that the packet-switched signalling connection has been prolonged.